

AMENDMENTS TO THE CLAIMS

In accordance with Rule 1.121, a complete claim listing is presented below, including appropriate status identifiers. Changes in the amended claims are shown by strikethrough for deleted material, and by underlining for added material.

1-15. (Cancelled)

16. (Currently Amended) A ceramic coated fiber, comprising:

(a) a fiber, and

(b) ceramic, coated on the fiber,

wherein the ceramic has a BET surface area of at least 60 m²/g,

~~the ceramic accounts for 10 to 90% by weight of the ceramic coated fiber, and~~

the ceramic comprises crystalline ceramic and further comprises silver and/or palladium.

17. (Original) The ceramic coated fiber of claim 16, wherein the ceramic comprises TiO₂ and/or TiON having an anatase structure.

18. (Original) The ceramic coated fiber of claim 16, wherein the ceramic comprises at least one member selected from the group consisting of TiO₂, TiON, TiOS, Al₂O₃, ZrO₂, and MgO.

19. (Previously presented) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of 60 m²/g to 300 m²/g.

20-27. (Cancelled)

28. (Original) A ceramic coated fiber, comprising:

(a) a fiber, and

(b) ceramic, coated on the fiber,

wherein the ceramic has a BET surface area of at least 50 m²/g, and

the ceramic comprises at least one member selected from the group consisting of Al₂O₃, ZrO₂, and MgO.

29. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of $60 \text{ m}^2/\text{g}$ to $300 \text{ m}^2/\text{g}$.
30. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic accounts for 10 to 90% by weight of the ceramic coated fiber.
31. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic further comprises silver and/or palladium.
32. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of at least $60 \text{ m}^2/\text{g}$.
33. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of $60 \text{ m}^2/\text{g}$ to $2000 \text{ m}^2/\text{g}$.
34. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of $100 \text{ m}^2/\text{g}$ to $500 \text{ m}^2/\text{g}$.
35. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of at least $100 \text{ m}^2/\text{g}$.
36. (Previously presented) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of $60 \text{ m}^2/\text{g}$ to $2000 \text{ m}^2/\text{g}$.
37. (Previously presented) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of $100 \text{ m}^2/\text{g}$ to $500 \text{ m}^2/\text{g}$.
38. (Previously presented) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of at least $100 \text{ m}^2/\text{g}$.
39. (New) The ceramic coated fiber of claim 16, wherein the ceramic accounts for 10 to 90% by weight of the ceramic coated fiber.
40. (Withdrawn - new) A method for producing radical species, comprising illuminating the fiber of claim 17.

41. (Withdrawn - new) A method for purifying and disinfecting air or water, comprising contacting the air or water with the fiber of claim 17, and illuminating the fiber.
42. (Withdrawn - new) A photochemical reactor comprising the fiber of claim 17.